

Contents

Summary	2
Introduction	2
Overview of Discover Bath (Discover) and Pathway to Bath (Pathway)	3
Overview of existing evidence	3
Methodology	6
Research questions	6
Participants	6
Surveys	6
Applicant Analysis	7
Engagement Analysis	7
Ethics	8
Results	8
Survey Analysis	8
Applicant Analysis	8
Engagement Analysis	9
Discussion	10
Impact of programme attendance on students' HE knowledge, expectations, sense of belonging & academic self-efficacy	10
Impact of programme attendance on University of Bath application rates	11
Correlation between programme components & University application rates	11
Conclusion	12
References	12
Appendices	16
Appendix A: Access and Participation Plan and Risks to Equality of Opportunity	16
Appendix B: TASO ASQ Implementation for Discover Bath and Pathway to Bath	16
Annendix C: TASO ASO analysis summary	17

Summary

This report presents findings from an evaluation of two University of Bath Widening Access programmes delivered in 2023/24 for Year 12 students. It forms part of ten research projects listed in Bath's Access and Participation Plan, designed to provide deeper understanding of systemic barriers to equality of opportunity that disadvantaged students may face. For more details see Appendix A.

The evaluation explored the effectiveness of a Year 12 single-intervention residential summer school (Discover) and a Year 12 multi-intervention programme (Pathway). Each was assessed independently in relation to supporting students' Higher Education (HE) knowledge, HE expectations, academic self-efficacy, sense of belonging, and applications to Undergraduate programmes at Bath.

A pre-post survey design, using the Transforming Access and Student Outcomes (TASO) Access and Success Questionnaire, was implemented, alongside admission and participant engagement analysis. In total 1,079 students participated across the two programmes, with 1,436 surveys responses collated.

Key findings

- Both programmes improved students' HE knowledge, academic self-efficacy, and sense of belonging.
- Minimal change in HE expectations was found, potentially reflecting a high baseline of motivation found in those attending.
- Academic content combined with guidance and experiential learning emerged as a strong driver of HE application behaviour.
- Undergraduate application rates to the University of Bath were significantly higher among programme participants compared with similar non-participants (those who applied for the programme but did not participate). Discover attendees applied at higher rates overall (61%) but Pathway project completers achieve the highest application rate (75%), suggesting depth of engagement is as important as programme length.

Considerations

- Anonymous survey responses could not be matched pre- and post- programme, limiting causal attribution. In addition, two constructs were not implemented fully, inhibiting programme comparability.
- Self-selection bias and concurrent participation in widening access activities could not be controlled for and may have influenced results.

Introduction

Universities offer a variety of initiatives aimed at widening participation in Higher Education (HE). The length and intensity of engagement can vary by activity, ranging from light touch assemblies to a sustained programme over months or years, with multiple components.

The University of Bath is committed to widening access and ensuring that students from diverse backgrounds can benefit from attending such an institution. Disparities and persistent inequalities in access and educational outcomes are evident across socio-economic and

demographic groups (Crenna-Jennings, 2018). Therefore, the University has developed a range of widening access programmes designed to engage with prospective post-16 student groups.

This report details an evaluation of the Discover Bath and Pathway to Bath programmes. Broadly speaking, these programmes have similar outcome measures with key differences in length and depth of engagement. Both programmes aim to positively impact students' HE knowledge, HE expectations, academic self-efficacy, and sense of belonging. These outcomes are intended to support applications to University of Bath Undergraduate programmes.

Overview of Discover Bath (Discover) and Pathway to Bath (Pathway)

Discover is a short-term engagement intervention, providing a 3-day residential summer school for Year 12 students. This on-campus academic enrichment experience immerses students within campus life, providing academic content alongside information, advice, and guidance (IAG) led content. Upon completion, participants may be eligible for a University of Bath guaranteed offer.

Discover's format has been in place since 2018/19, with a varied delivery method in 2019/20 due to the COVID-19 pandemic. On average, 370 students are welcomed on campus and spaces are advertised based on subject areas. For the 2023/24 academic year the programme was split into three residentials: (1) Faculty of Engineering and Design, (2) Faculty of Science, and (3) Faculty of Humanities, Social Science and School of Management. The subject content differed for each subject stream, but core IAG and enrichment activities were scheduled to be the same.

Pathway runs for six to eight months, comprising of multiple components for Year 12 students. With a blended learning approach, students take part in an online academic enrichment programme, IAG webinars, and a residential that balances academic enrichment and student life. As part of the academic content, students are encouraged to complete a project that aligns with their subject area to support academic skills development. Those who complete a project are invited to attend the residential, and those who gain a grade C or above may be eligible for a University of Bath guaranteed offer.

Over time, this programme has expanded from 48 students enrolling in 2019/20 to 710 enrolling in 2023/24. As such, the programme has continued to develop subject streams, with 16 delivered in 2023/24 for the online content. For 2023/24 one residential experience was advertised.

Overview of existing evidence

This literature review addresses areas that correspond with the evaluation's research aims: (1) impact of widening access programmes, including application rates, (2) review of short- and long-term engagement programmes, and (3) evidence on specific programme components.

1) Impact of Widening Access Programmes

Outcome measures for university access programmes can be classified as "hard" (e.g. university applications, offers, enrolments) or "soft/intermediate" outcomes (e.g. HE knowledge, HE expectations, belonging and academic self-efficacy) (Ní Chorcora et al., 2023). Both types of measures are important in assessing programme effectiveness, with intermediate outcomes acting as a precursor to application and enrolment behaviours. Similar outcomes measures may be defined within any given widening access initiative, regardless of length and intensity of programme.

1a) Intermediate outcomes

Intermediate outcomes reflect the cognitive, motivational, and identity-based changes that enable students to access HE. Four domains are central within University of Bath Widening Access programmes:

- HE knowledge
- HE expectations
- Academic self-efficacy
- Sense of belonging

Guidance-based interventions support HE knowledge and expectations, by focusing on bridging gaps in knowledge. Both parental and students' knowledge of HE can significantly influence decision making, with limited understanding of HE potentially creating barriers to access (Davies et al., 2014).

Students' understanding of pathways, finance and institutions, and their confidence in navigating transitions, are influenced by various social, economic, and cultural factors (Bowes et al., 2015). Bourdieu's concept of cultural capital illustrates how disadvantaged students may encounter structural barriers that limit access to resources and networks to support HE awareness (Sullivan, 2001). Students from lower socio-economic groups often rely on informal "hot" information from social networks (Archer et al., 2007). This may constrain informed decision-making, underscoring the importance of targeted IAG interventions (Diamond et al., 2014). Building HE foundations may also equip students with the tools to develop confidence in their own academic abilities.

Belief in one's ability to plan and execute skills necessary to produce certain behaviours (Bandura, 1997) and one's perception of themselves as formed through experiences within their environment (Shavelson et al., 1976) are strong predictors of attainment and HE entry (Hansen & Henderson, 2019; Henderson et al., 2017; Richardson et al., 2012). Those who perceive themselves as academically competent may obtain higher grades due to their higher self-concept and more autonomous motivation in school (Marsh & Martin, 2011).

Interventions that include mentoring, subject-specific teaching and skills workshops can raise self-efficacy, motivation, and confidence (Bowes, 2023; White et al., 2007), particularly when personalised and designed to build academic capital (Lawson et al., 2024; Moogan, 2011). A stronger sense of efficacy, in turn, can enhance how students perceive themselves within HE environments.

A sense of belonging can refer to a student's feeling of being accepted, supported by, and connected within the academic community (Goodenow, 1993). However, as a plural concept, it can also encompass notions of connection with peers, sense of academic and social fit within an institution (Lotwoski et al., 2004; Thomas, 2012; Wilcox et al., 2005). To form the foundations of belonging, students may require connection, inclusion, support, and autonomy (Blake et al., 2022) and can be defined at any moment due to their academic engagement, social engagement, surroundings, and personal space (Ahn & Davies, 2020).

Sense of belonging is widely regarded as a key but hard-to-measure asset in HE progression (Robertson et al., 2019), with the concept being multi-level and multi-relational which is highly subjective, changes with time, and varies across student groups (Cureton & Gravestock, 2019; Mountford-Zimdars et al., 2015; Thomas et al., 2017). Even with knowledge and confidence, student may remain hesitant to apply if they perceive HE as unwelcoming or "not for people like them" (Reay et al., 2001; Theile et al., 2017). During access and transition phases, students can

develop their sense of belonging and be reassured that they will be able to make the necessary social connections and feel valued as a member of the institution's learning community (Humphrey & Lowe 2017; Matheson, 2018). Exposure to university settings and engagement with relatable role models, such as student ambassadors, can counter these perceptions and support progression (Gladstone & Cimpian, 2021; Sanders & Higham, 2012; Ylonen, 2010).

Taken together, these outcomes illustrate how widening access programmes support students not only by addressing informational barriers but also fostering the confidence and sense of belonging required to see HE as both attainable and desirable.

1b) University application outcomes

"Hard" outcomes, particularly university application and enrolment rates, remain the most tangible measure of impact. Meta-analyses and reviews indicate mixed effects on application rates. For example, Gorard et al. (2012) found little evidence that aspirations influence university participation, while Burgess et al. (2021) reported multi-component programmes, including summer schools and masterclasses, were predictive of HE acceptance. Nonetheless, causal evidence remains limited, with some evaluations finding negligible effects on actual applications despite positive shifts in attitudes (Robinson & Salvestrini, 2020; TASO, 2023).

2) Short and long-term programmes

The intensity and duration of outreach may be a distinguishing factor that influences outcome measures. Research on single or short programmes have shown some positive effects, including summer schools (Hatt et al., 2009) and light-touch IAG engagements (Sanders et al., 2018). However, there are difficulties in collecting tracking data for low-intensity activities when interactions are so brief. As a result, monitoring and evaluation tend to be more feasible, and therefore more heavily emphasised, within longer engagement programmes where sustained contact justifies additional resource and effort.

Multi-intervention and longitudinal programmes provide sustained opportunities for students to build knowledge, skills, and mentoring relationships (Younger et al., 2019), with evidence suggesting they are more effective than one-off or single interventions (Herbaut & Geven, 2020). Robinson and Salvestrini (2020) highlight that mentoring and repeated engagement amplify impacts on knowledge and confidence, while Martin (2024) finds associations between multi-year outreach and improved progression outcomes. Nevertheless, gaps remain in isolating which programme elements drive success, and in understanding the long-term persistence of effects beyond immediate application cycles.

3) Programme components

Few evaluations have disentangled the specific components of multi-intervention programmes. These interventions operate in a complex social environment, where programme attribution is difficult, as isolating social, cultural, and political factors is not always possible. This is alongside students' exposure to other similar interventions that is not always apparent. In supporting HE knowledge, mentoring and counselling programmes have been proven effective (O'Sullivan et al., 2017). Sustained, personalised IAG may bridge gaps in knowledge though HE participation remains mixed (Gorard et al., 2012; Summers et al., 2024) and IAG may be more effective when combined with other forms of support (McGuigan et al., 2016; Silva et al., 2016).

Summer schools are often linked to gains in confidence, knowledge, and sense of belonging (Robinson & Salvestrini, 2020; TASO, 2023), though effects on applications and entry remain uneven. In addition, Burgess et al. (2021), found that combinations of summer schools, campus

visits, IAG and masterclasses were most predictive of HE entry, with five- or six-component models offering the optimal balance between input and impact.

Despite these promising findings, methodological limitations, such as the lack of comparison groups and reliance on self-reported outcomes, limit some of the conclusions.

Methodology

Research questions

The analysis aims to address the following research questions:

- 1. What are the effects on student HE knowledge, HE expectations, sense of belonging, and academic self-efficacy for those that complete a selected University of Bath Widening Access Programme?
- 2. Does participating in a University of Bath Widening Access programme increase Bath's Undergraduate application rates among eligible applicants, compared to those who did not attend?
- 3. Do outcome measures differ depending on the length/depth of the programme?
- 4. Is there any correlation between key components on a multi-intervention programme and students' rates of applying to University of Bath?

Discover and Pathway were chosen because the two programmes support the same student cohorts, have similar outcome measures, some similar programme components but differ in programme length and weight of academic content.

Participants

The samples are made up of all those students who met the criteria to participate in the respective programme. Eligibility is deemed based on the following characteristics:

- Academically able to study at Bath in their chosen subject
- Eligibility for Free School Meals between 11-16 years old
- If applicant attended an independent school, this must have been for no more than two academic years in the last four years of school/college
- Home postcode is within an area of high socio-economic disadvantage (Index of Multiple Deprivation quintile 1 and 2)
- Care leaver
- Young carer
- Refugee, asylum seeker or have been granted humanitarian protection
- Estranged from parents/guardians

Surveys

Both programmes implemented an anonymous pre-post survey design for Year 12 students to assess changes in the key variables over time: HE knowledge, HE expectations, sense of belonging and academic self-efficacy, supporting Research Question 1 and 3.

A pre-survey was sent to all students intending to participate. The Discover survey was sent electronically one week ahead of residential arrival and the Pathway pre-survey was given in the first information session. For Discover, the post-survey was disseminated in a plenary session via paper form. For Pathway, the post-survey was conducted online and shared at the end of the programme.

The TASO Access and Success Questionnaire (ASQ) (TASO, 2024) was reviewed, and relevant constructs were implemented. TASO (2024) conducted factor analysis to assess the validity of the ASQ and ensure it measures distinct underlying attitudes and perceptions. The included constructs and factor loadings are within Appendix B.

Due to the anonymous nature of the data collection, it was not possible to match individual responses between the pre- and post-surveys. As a result, we were unable to exclude responses from participants who may have only completed one of the two surveys. Consequently, the pre- and post- survey datasets were treated as independent samples, with each representing a distinct group of respondents. Given the non-parametric nature of the data, Mann Whitney U-tests were used to compare pre- and post-survey response for each construct within each programme, with separate tests conducted for each.

Applicant Analysis

All applicants to the 2023/24 Discover and Pathway were uploaded to the Higher Education Access Tracker (HEAT). This was regardless of attending the programme. This gives the ability to track applicants of University of Bath Widening Access programmes and identify successful applications to HE. Due to the lag in longitudinal tracking, for this evaluation programme applicants were matched to internal admissions datasets in July 2025 to understand the rate of applications to University of Bath. Programme application records were matched to University admissions data based on personal information from applicants.

Applicants offered a place on the Discover and Pathway programme were matched to see if those that met the characteristic and academic criteria applied to University of Bath in the 2025 admissions cycle. All programme enrollers and non-enrollers were reviewed to see if there are any differences in Undergraduate application rates for these groups to support Research Question 2.

Engagement Analysis

Pathway initially provides an online course delivered by academic staff, where student choose the subject to study and work towards completing an academic-style project. Those who complete a project are invited to attend an optional 3-day residential experience.

A version of participant engagement analysis was employed to review the impact of these two key components on Undergraduate application rates to the University of Bath, to support Research Question 4. This aimed to answer the following questions:

- 1. Does completing a project increase students' application rate to Bath?
- 2. Does attending the residential have an impact on students' application rate to Bath?

Academic projects and residential were selected as they represent the core academic elements of the programme and had sufficient engagement data for both elements. Additionally, participation in the project is a prerequisite for entry into the residential, enabling us to assess progression through the programme.

The analysis will be able to compare the following groups:

- Students who did not complete a project but were engaged in Pathway
- Students who completed a project but did not attend the residential
- Students who completed a project and attended the residential

Project completion and grades were collected, alongside residential attendance information. A combination of these datasets allowed the investigation into how many students were engaged with the programme at different points, what level of intervention they received and whether they subsequently applied to University of Bath.

Ethics

A favourable ethics decision for this evaluation was received in December 2024 from the University of Bath's Social Science Research Ethics Committee.

Results

Survey Analysis

The results are based on pre-programme and post-programme survey responses. Descriptive statistics and Mann Whitney U-tests were conducted via Excel to examine the four questionnaire constructs across the two programmes, with an online p value calculator to determine this from the z scores. Full descriptive and statistical results are provided in Appendix C.

a) Impact of programme attendance on students' HE expectations

Students in both programmes began with high expectations about HE, and these did not change significantly after attending. For Discover, the average score remained stable (4.71 before, 4.69 after), while Pathway showed a small increase (4.73 to 4.77). These shifts were not statistically meaningful. This suggests that students already had strong expectations before joining, and programme participation did not substantially alter these views.

b) Impact of programme attendance on students' HE knowledge

This construct was not fully implemented for Discover, with only Items 1 and 2 used in the preand post- survey. This has resulted in lower overall averages from the factor loading. Both programmes led to significant improvements in students' knowledge about HE. Discover participants showed a moderate increase (from 2.31 to 2.60), while Pathway participants demonstrated an even larger gain (from 3.59 to 4.08). Statistical tests confirmed that these changes were highly significant with moderate effect sizes, meaning that the programmes had a real, meaningful impact. In practical terms, students finished with a better understanding of how HE works, and the longer Pathway programme produced the stronger improvement.

c) Impact of programme attendance on students' sense of belonging

Students in both programmes reported a stronger sense of belonging after participating. Discover scores rose from 3.98 to 4.16, while Pathway increased from 3.99 to 4.19. These changes were statistically significant, although the effect sizes were small. This indicates that programme attendance helped students feel more connected and included.

d) Impact of programme attendance on students' academic self-efficacy

This construct was not fully implemented for Discover, with only items 2 and 3 used in the preand post-survey. Both programmes improved students' confidence in their academic abilities. Discover participants showed a modest increase (from 2.63 to 2.72), and Pathway participants reported a slightly larger gain (from 4.01 to 4.16). These results were statistically significant with small effect sizes. The findings suggest that participation supported students in feeling more capable academically, with the longer Pathway programme having a marginally stronger impact.

Applicant Analysis

All students who applied to the Discover and Pathway programmes were provided an offer to participate in the programme if they met the characteristic and academic criteria.

Students who attended Discover were more likely to apply to Bath than those who applied to the programme but do not attend (+32pp). In 2023/24, Discover received 1188 applications. 529 offers were provided to participate, with 369 (70%) attending the residential programme (Figure 2). 225 of those who attended Discover applied to the University of Bath in the 2025 admissions cycle, equating to 61%. In comparison, 30% (n = 160) of those that gained a programme offer but did not attend applied to University of Bath in 2025.

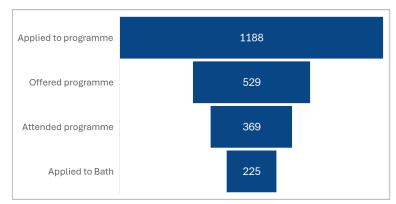


Figure 2: Discover applicants to University of Bath admissions applicants, based on programme attendance.

Students who attended Pathway were also more likely to apply to Bath than those who applied to the programme but did not attend (+32pp). In 2023/24, Pathway received 1541 applications. 846 offers were provided to participate, with 84% (n = 709) enrolled on the intensive programme (Figure 3). 315 of those who enrolled on Pathway applied to the University of Bath in the 2025 admissions cycle, equating to 44%. In comparison, 12% (n = 17) of those that gained a programme offer but did not attend applied to the University of Bath in 2025.

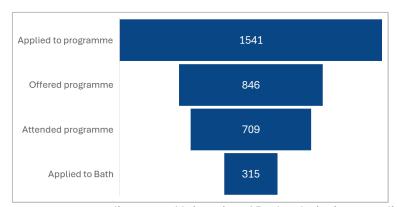


Figure 3: Pathway programme applicants to University of Bath admissions applicants, based on programme attendance.

Engagement Analysis

The analysis compares the impact of three levels of engagement (no project completion, project completion only, and project completion and residential attendance) on Undergraduate application rates to University of Bath.

Of the 709 enrollers of Pathway 2023/24, 59% (n = 420) submitted a project. Only those who submitted a final project, at any grade, were eligible to attend the residential. 61% (n = 256) of those that submitted a project attended the residential.

Figure 4 provides a breakdown of students engaged in key Pathway components with University of Bath 2025 admission application data. 64% (n = 268) of students who submitted a project

applied to Bath, compared to 16% (n = 47) of those that did not submit a project applying to the University.

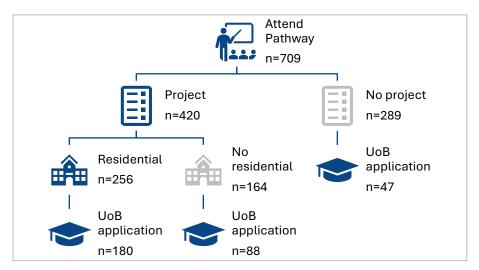


Figure 4: Breakdown of participation in two key components of the Pathway programme, with resulting admission applications to Bath.

Those who achieved a grade C or above in their project and met other criteria (Home fee status, subject interest, and course entry requirements) were eligible for a guaranteed offer. 92% (n = 386) of submitted projects received a C or above (Table 5).

Table 5: Descriptive statistics for project grades on Pathway.

	A*	Α	В	С	D or below/ungraded
n	149	115	70	52	35
%	35.39%	27.32%	16.63%	12.35%	8.31%

Nevertheless, engagement with both the project and residential components were shown to increase the applications to the University. For project completers, those attending the residential were more likely to apply to the University (70%, n = 180) compared to those that did not attend the residential (53%, n = 88).

Discussion

This analysis set out to understand the impact of two of Bath's widening access programmes on student's HE knowledge, HE expectations, sense of belonging, academic self-efficacy, and university application behaviour. The findings offer valuable insights into the comparative strengths and design implications of short-term versus sustained, multi-intervention initiatives.

Impact of programme attendance on students' HE knowledge, expectations, sense of belonging and academic self-efficacy

Survey analysis indicates there is an association between programme attendance and more positive attitudes towards HE. Both widening access programmes positively influenced students' HE knowledge, sense of belonging, and academic self-efficacy. The magnitude of change differed by programme which aligns with existing literature regarding targeted interventions and the use of sustained programme engagement (Harding & Bowes, 2022; Robinson & Salvestrini, 2020).

However, expectations about attending university remained largely unchanged for both programmes. This outcome aligned with our expectations, given that many participants were already predisposed to HE pathways and presumably already highly motivated to attend university. As Gorard et al. (2012) argue, aspirations are often fixed by post-16 study, particularly among students with prior exposure to HE guidance.

It is important to note that these findings are based on independent samples, due to unmatched pre- and post-survey responses. This limits the ability to track individual change over time and introduced potential variability unrelated to programme effects. Additionally, inconsistencies in survey implementation across programmes may have affected construct measurement reliability and comparability.

Impact of programme attendance on University of Bath Undergraduate application rates

Students who participated in either programme were significantly more likely to apply to the University of Bath than those who applied to the programme but did not participate, indicating a strong link between programme engagement and application behaviour. This supports the notion that intermediate outcomes, like increased HE knowledge and academic self-efficacy, can translate into tangible application outcomes.

Interestingly, Discover participants applied at higher rates overall. Yet, when considering only Pathway project completers, application rates across programmes were comparable. Both programmes offered guaranteed offers, subject to admissions criteria, with Pathway using the project grades as part of the review criteria. The overwhelming majority achieved the necessary grade to be eligible for a guaranteed offer. This suggests that the depth of engagement, particularly through completing academic projects, may be a critical factor in influencing further engagement and application decisions and the use of task-based and credit bearing activities may want to be considered in programme design. However, the impact of guaranteed offers for these programmes was not fully considered within this analysis and should be reviewed in future evaluation work.

Additionally, self-selection bias must be considered. Students who chose to participate were likely motivated and predisposed to apply to high-tariff institutions. The programmes' eligibility criteria may have further concentrated this effect, limiting generalisability. Moreover, the analysis does not account for other concurrent interventions that may have influenced outcomes, where students are engaged in further University of Bath programmes and/or attending other providers' provision.

Correlation between programme components and University Undergraduate application rates

Findings suggest that academic content, guidance, and experiential learning are particularly influential in driving HE applicant progression. Discover, while shorter in duration, incorporated many of the structural elements of Pathway, including academic-led streams and peer support. Pathway, however, offered more sustained and tailored engagement, allowing for deeper experiential learning opportunities. The use of task-led initiatives provided students with learning akin to university-like study and provided opportunities for increased academic self-efficacy scores, when compared to Discover.

Students who complete all academic work within Pathway are more likely to sustain their programme interest, gain an invitation to a residential and continue to explore the opportunity to attend the University. Those students who decide early within the Pathway programme that Bath

or the subject area is not suitable will not complete the project and will not be invited to the residential.

The comparable application rates among Discover attendees and Pathway project completers highlights the importance of component quality over programme length. This supports Burgess et al.'s (2021) paper, who argue that intervention combining academic alignment with experiential learning are most effective.

Without qualitative data and further disaggregated engagement data, it remains unclear which specific elements were most impactful. The absence of student voice limits our understanding of how and why these components influenced behaviour. Future evaluations should incorporate mixed methods to capture these nuances, and review how engagement data collection can be strengthened.

Conclusion

This evaluation indicates both Discover and Pathway positively influence students' readiness and confidence for HE, resulting in high levels of applications to Bath. The stronger indications of impact were associated with structured academic components, task-oriented learning, and sustained engagement. Nevertheless, care must be provided based on the evaluation design when interpreting these results. Without identifying individual survey responses, collecting and analysing demographic data and reviewing the use of comparator groups we cannot be certain that the correlations made are because of the intervention or natural changes.

As access and participation work evolves, this analysis offers practical, evidence-informed insights to guide programme delivery, institutional planning, and sector-wide policy. By building on these findings and continuing to evaluate with rigour and intention, the University can further strengthen its role in widening access, improving outcomes for under-represented students.

References

- Ahn, M. Y., & Davis, H. H. (2020). Four domains of students' sense of belonging to university. *Studies in Higher Education*, *45*(3), 622-634.
- Archer, L., Hollingworth, S., & Halsall, A. (2007). University's not for me—I'm a Nike person': Urban, working-class young people's negotiations of style', identity and educational engagement. *Sociology*, *41*(2), 219-237.
- Bandura, A. (1997). Self-efficacy: The exercise of control, New York, NY: Freeman.
- Blake, S., Capper, G. & Jackson, A. (2022). Building belonging in higher education.

 Recommendations for developing an integrated institutional approach. *Pearson-WonkHE*. Available at https://wonkhe.com/wp-content/wonkhe-uploads/2022/10/Building-Belonging-October-2022.pdf/.
- Bowes, L. (2023). Fifth independent review of impact evaluation evidence submitted by Uni Connect partnerships: A summary of the local impact evidence to date for the Office for Students. CFE Research. Available at
 - https://www.officeforstudents.org.uk/publications/fifth-independent-review-of-impact-evaluation-evidence-submitted-by-uni-connect-partnerships/

- Bowes, L., Evans, J., Nathwani, T., Birkin, G., Boyd, A., Holmes, C., Thomas, L., & Jones, S. (2015). Understanding progression into higher education for disadvantaged and underrepresented groups. *Department for Business, Innovation and Skills*.
- Burgess, A. P., Horton, M. S., & Moores, E. (2021). Optimising the impact of a multi-intervention outreach programme on progression to higher education: recommendations for future practice and research. *Heliyon*, 7(7).
- Crenna-Jennings, W. (2018). Key drivers of the disadvantage gap: Literature review. *Education in England Annual Report. Education Policy Institute*. Available at https://epi.org.uk/wp-content/uploads/2018/07/EPI-Annual-Report-2018-Lit-review.pdf.
- Cureton, D. and Gravestock, P. (2019) 'We Belong': differential sense of belonging and its meaning for different ethnic groups in higher education. *COMPASS: Journal of Learning and Teaching*, 12(1). Available at: https://journals.gre.ac.uk/index.php/compass/article/view/942/.
- Davies, P., Qiu, T., & Davies, N. M. (2014). Cultural and human capital, information and higher education choices. *Journal of Education Policy*, 29(6), 804-825.
- Diamond, A., Roberts, J., Vorley, T., Birkin, G., Evans, J., Sheen, J., & Nathwani, J. (2014). *UK review of the provision of information about higher education: Advisory study and literature review.* Leicester: Report to the UK Higher Education Funding Bodies by CFE Research.
- Gladstone, J. R., & Cimpian, A. (2021). Which role models are effective for which students? A systematic review and four recommendations for maximizing the effectiveness of role models in STEM. *International journal of STEM education*, 8, 1-20.
- Goodenow, C. (1993). Classroom belonging among early adolescent students: Relationships to motivation and achievement. *The Journal of early adolescence*, *13*(1), 21-43.
- Gorard, S., See, B. H., & Davies, P. (2012). The impact of attitudes and aspirations on educational attainment and participation. *York: Joseph Rowntree Foundation*. Available at https://www.jrf.org.uk/public-attitudes/the-role-of-aspirations-attitudes-and-behaviour-in-closing-the-educational/.
- Hansen, K., & Henderson, M. (2019). Does academic self-concept drive academic achievement?. *Oxford Review of Education*, 45(5), 657-672.
- Harding, S., & Bowes, L. (2022). Fourth independent review of impact evaluation evidence submitted by Uni Connect partnerships: A summary of the local impact evidence to date for the Office for Students. CFE Research. Available at https://www.officeforstudents.org.uk/publications/fourth-independent-review-of-impact-evaluation-evidence-submitted-by-uni-connect-partnerships/
- Henderson, M., Shure, N., & Hansen, K. (2017). Does academic self-concept predict further and higher education participation?. Available at https://ora.ox.ac.uk/objects/uuid:8019883a-e3a7-40ed-9232-8e517022dbd0/.
- Herbaut, E., & Geven, K. (2020). What works to reduce inequalities in higher education? A systematic review of the (quasi-) experimental literature on outreach and financial aid. Research in Social Stratification and Mobility, 65, 100442.

- Humphrey, O., & Lowe, T. (2017). Exploring how a 'Sense of Belonging' is facilitated at different stages of the student journey in Higher Education. *The Journal of Educational Innovation, Partnership and Change*, 3(1), 172-188.
- Lawson, F., Colley, S., Anthony, A., Billingsley, B., & Harvey, D. (2024). Widening participation and success in STEM: embedding research-engaged practice to measure impact. *Widening Participation and Lifelong Learning*, 26(2), 248-261.
- Marsh, H. W., & Martin, A. J. (2011). Academic self-concept and academic achievement: Relations and causal ordering. *British journal of educational psychology*, 81(1), 59-77.
- Martin, P. (2024). Do participants in widening participation outreach programmes in England progress to selective universities at a higher rate than would otherwise be expected?. *British Educational Research Journal*, *50*(4), 1962-1982.
- Matheson, R. (2018). Transition through the student lifecycle. In R. Matheson, S. Tangney, & M. Sutcliffe (Eds.), *Transition in, through and out of higher education* (pp. 5–16). Oxon: Routledge.
- McGuigan, M., McNally, S., & Wyness, G. (2016) 'Student Awareness of Costs and Benefits of Educational Decisions: Effects of an Information Campaign'. Journal of Human Capital, 10(4), 482-519.
- Moogan, Y. J. (2011). An analysis of school pupils' (with low social economic status) perceptions of university, regarding programmes of study. *Educational Studies*, *37*(1), 1-14.
- Mountford-Zimdars, A., Sabri, D., Moore, J., Sanders, J., Jones, S., & Higham, L. (2015). Causes of differences in student outcomes (HEFCE). Available at https://dera.ioe.ac.uk/id/eprint/23653/1/HEFCE2015_diffout.pdf/.
- Ní Chorcora, E., Bray, A., & Banks, J. (2023). A systematic review of widening participation: Exploring the effectiveness of outreach programmes for students in second-level schools. *Review of Education*, 11(2), e3406.
- O'Sullivan, K., Mulligan, R., Kuster, M., Smith, R., & Hannon, C. (2017). A college focused mentoring programme for students in socio-economically disadvantaged schools: The impact of mentoring relationship and frequency on college-going confidence, application efficacy and aspirations. *Widening Participation and Lifelong Learning*, 19(2), 113-141.
- Reay, D., Davies, J., David, M., & Ball, S. J. (2001). Choices of degree or degrees of choice? Class, 'race' and the higher education choice process. *Sociology*, *35*(4), 855-874.
- Richardson, M., Abraham, C., & Bond, R. (2012). Psychological correlates of university students' academic performance: a systematic review and meta-analysis. *Psychological bulletin*, 138(2), 353.
- Robertson, A., Cleaver, E., & Smart, F. (2019). Beyond the metrics: Identifying, evidencing and enhancing the less tangible assets of higher education. Available at https://researchonline.gcu.ac.uk/en/publications/beyond-the-metrics-identifying-evidencing-and-enhancing-the-less-/.
- Robinson, D., & Salvestrini, V. (2020). The impact of interventions for widening access to higher education: A review of the evidence. *Education Policy Institute*. Available at

- https://epi.org.uk/publications-and-research/impact-of-interventions-for-widening-access-to-he/.
- Sanders, J., & Higham, L. (2012). The role of higher education students in widening access, retention and success. A Literature Synthesis of the Widening Access, Student Retention and Success. Available at https://www.advance-he.ac.uk/knowledge-hub/role-higher-education-students-widening-access-retention-and-success-literature/.
- Sanders, M., Burgess, S., Chande, R., Dilnot, C., Kozman, E., & Macmillan, L. (2018). Role models, mentoring and university applications-evidence from a crossover randomised controlled trial in the United Kingdom. *Widening Participation and Lifelong Learning*, 20(4), 57-80.
- Shavelson, R. J., Hubner, J. J., & Stanton, G. C. (1976). Self-concept: Validation of construct interpretations. *Review of educational research*, 46(3), 407-441.
- Silva, A. S., Sanders, M., & Chonaire, A. N. (2016). Does the heart rule the head? Economic and emotional incentives for university attendance. London: Behavioural Insight Team.
- Sullivan, A. (2001). Cultural capital and educational attainment. Sociology, 35(4), 893-912.
- Summers, R. J., Fullwood, S., Sherlock, R., & Moores, E. (2024). The importance of information, advice and guidance in widening access to higher education. *Widening Participation and Lifelong Learning*, *26*(2), 161-181.
- TASO. (2023). School's in for the summer: interim findings on the impact of summer schools.

 Available at https://cdn.taso.org.uk/wp-content/uploads/2023-11_Report_Schools-infor-the-summer-interim-findings-on-impact-of-summer-schools_TASO.pdf/.
- TASO (2024). Access and Success Questionnaire. Available from https://taso.org.uk/evidence/evaluation-guidance-resources/access-and-success-questionnaire/.
- The Office for Students (2025). Access and participation glossary. Available from https://www.officeforstudents.org.uk/for-providers/equality-of-opportunity/access-and-participation-glossary/.
- Thomas, L. (2012). Building student engagement and belonging in Higher Education at a time of change. Available from https://www.advance-he.ac.uk/knowledge-hub/building-student-engagement-and-belonging-higher-education-time-change-summary/.
- Thomas, L., Hill, M., O'Mahony, J., & Yorke, M. (2017). Supporting student success: strategies for institutional change. *What works*. Available at https://www.advance-he.ac.uk/knowledge-hub/supporting-student-success-strategies-institutional-change/.
- White, K., Eames, A., & Sharp, C. (2007). A qualitative evaluation of the IntoUniversity programme. National Foundation for Educational Research. Available at https://www.nfer.ac.uk/media/gemgsqie/qualitative_evaluation_of_the_intouniversity_programme.pdf/.
- Wilcox, P., Winn, S., & Fyvie-Gauld, M. (2005). 'It was nothing to do with the university, it was just the people': the role of social support in the first-year experience of higher education. Studies in higher education, 30(6), 707-722.

Ylonen, A. (2010). The role of student ambassadors in higher education: An uneasy association between autonomy and accountability. *Journal of Further and Higher Education*, 34(1), 97-104.

Younger, K., Gascoine, L., Menzies, V., & Torgerson, C. (2019). A systematic review of evidence on the effectiveness of interventions and strategies for widening participation in higher education. *Journal of Further and Higher Education*, 43(6), 742-773.

Appendices

Appendix A: Access and Participation Plan and Risks to Equality of Opportunity

The University of Bath's Access and Participation Plan¹ identifies nine risks to equality of opportunity (Figure 1). Equality of opportunity means "individuals are not hampered in accessing and succeeding in higher education as a result of their background or circumstances they cannot fairly influence" (The Office for Students, 2025).

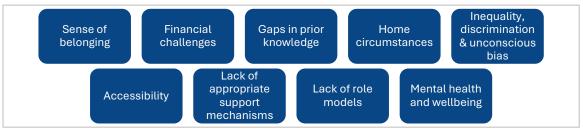


Figure 1: University of Bath's nine key risks to equality of opportunity across the student lifecycle.

The associated risks that the Widening Access programmes are designed to address are:

- sense of belonging
- gaps in prior knowledge
- home circumstances
- lack of appropriate support mechanisms
- lack of role models

Appendix B: TASO ASQ Implementation for Discover Bath and Pathway to Bath

Item	Construct	Statement	Factor loading
1	HE expectations	I am thinking about going to university in the future	1.00
1	HE knowledge	I know what studying at university would be like.	0.72
2	HE knowledge	I understand how studying at university is different from studying in school or at college.	0.63
3	HE knowledge	I believe that if I apply to university, I will get a place.	0.89
1	Academic self- efficacy	I am confident that I can get the grades required to progress to university.	0.73
2	Academic self- efficacy	I have the academic ability to do well at university.	0.61

¹ University of Bath Access and Participation Plan available from https://www.bath.ac.uk/publications/access-and-participation-plan-2024-to-2028-and-fee-information/

3	Academic self-	I could manage with the level of study required at	0.71
	efficacy	university.	
1	Sense of belonging	University is for people like me.	0.64
2	Sense of belonging	I would fit in well academically with others at	0.79
		university.	
3	Sense of belonging	I would fit in well socially with others at university	0.56

Appendix C: TASO ASQ analysis summary

Table 1: Higher Education Expectations

Programme	Pre M (SD)	Post M (SD)	Change	Statistical sig.	Effect size
Discover	4.71 (0.59)	4.69 (0.61)	-0.02	p = .876	r = 0.006
Pathway	4.73 (0.60)	4.77 (0.65)	+0.04	p = .060	r = 0.07

Table 2: Higher Education Knowledge

Programme	Pre M (SD)	Post M (SD)	Change	Statistical sig.	Effect size
Discover	2.31 (0.37)	2.60 (0.30)	+0.29	p <.001	r = 0.42
Pathway	3.59 (0.63)	4.08 (0.51)	+0.49	p <.001	r = 0.39

Table 3: Sense of Belonging

Programme	Pre M (SD)	Post M (SD)	Change	Statistical sig.	Effect size
Discover	3.98 (0.68)	4.16 (0.74)	+0.18	p <.001	<i>r</i> = 0.15
Pathway	3.99 (0.63)	4.19 (0.59)	+0.20	p <.001	r = 0.16

Table 4: Academic self-efficacy

Programme	Pre M (SD)	Post M (SD)	Change	Statistical sig.	Effect size
Discover	2.63 (0.42)	2.72 (0.44)	+0.09	p <.05	<i>r</i> = 0.12
Pathway	4.01 (0.58)	4.16 (0.52)	+0.15	p <.001	<i>r</i> = 0.13

Access and Participation Evaluation



APP Impact Team
Student Recruitment and Admissions
University of Bath
Claverton Down
Bath
BA2 7AY

Email: appimpact@bath.ac.uk